DOCUMENT RESUME

ED 195 784 CE 027 456

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TITLE A Model Plan to Serve the Handicapped Student in Technology: A Sensitized Experience.
INSTITUTION North Carolina Agricultural and Technical State Univ., Greensboro.
PUB DATE Oct 80
NOTE 21p.; Paper presented at the National Industrial Technology Conference (Jackson, MS, October 15-17, 1980).
AVAILABLE FROM Department of Industrial Technology, North Carolina Agricultural and Technical State University--Price Hall, Greensboro, NC 27411 ($4.25).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Definitions; *Disabilities; Instructional Materials; *Learning Activities; *Learning Disabilities; Physical Disabilities; Postsecondary Education; Secondary Education; Simulation; *Students; *Technical Education; Visual Impairments; Vocational Education; *Workshops

ABSTRACT

These workshop materials are designed to assist technologists in coping with handicapped students in their programs. They contain information on the characteristics of handicapped persons, and some of the psychological and legal considerations that form the background from which the students come; and they focus on developing insight that will help instructors to provide a better program for handicapped students. The materials consist of four learning experiences, with self-checking tests for each experience. Learning experience 1 explores the characteristics of handicapping conditions and the psychological factors associated with them; learning experience 2 provides an orthopedically handicapped simulation; learning experience 3 discusses learning disabilities and includes a sample of how a reading-disabled student views a text selection; and learning experience 4 provides a simulation of visual impairment. (KC)

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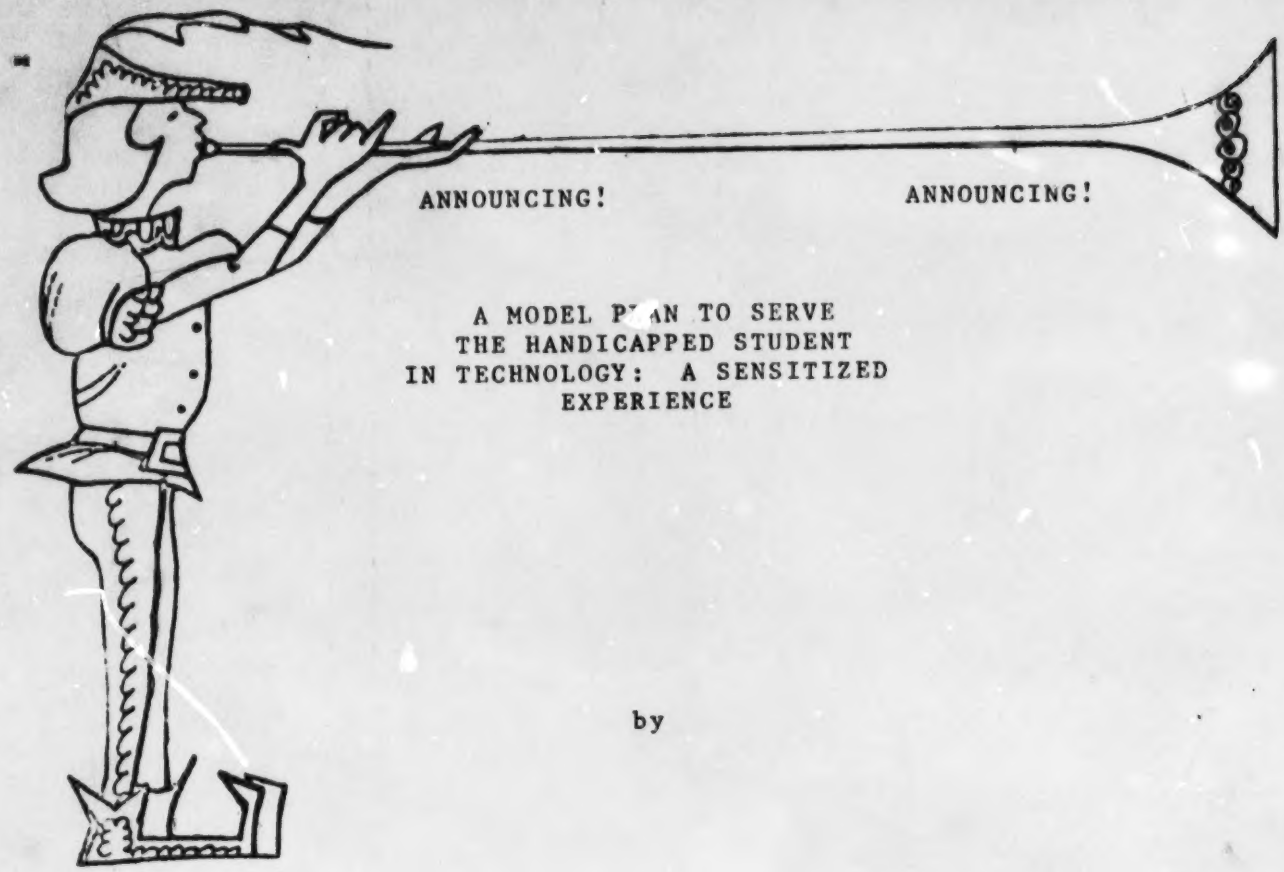

A MODEL PLAN TO SERVE THE HANDICAPPED STUDENT IN TECHNOLOGY: A SENSITIZED EXPERIENCE

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OCTOBER 15-17, 1980

CE 027458

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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A MODEL PLAN TO SERVE THE HANDICAPPED STUDENT IN TECHNOLOGY - A SENSITIZED EXPERIENCE

As we know, most public school systems are moving towards serving the handicapped and disadvantaged students in regular classroom settings. It is being called mainstreaming. With a national focus on serving the students with special needs the question seems to be, what are we doing in Technology for this special group of students? In asking what are we doing, we may need to interject what are we able to do. Some personal observations lead me to pose some serious questions. My observation was that over 90% of the teachers I interviewed for a teaching position for handicapped students who had a degree in special education, either had a relative who was handicapped or they were "close" to someone who was handicapped.

My questions then became: 1) did early association with handicapped persons develop empathy among these teachers for working with handicapped persons? 2) how will teachers who have not had exposure to handicapped students respond when they are placed in their classrooms? 3) what strategies may be employed to develop the affective domain in order to assist teachers in working with handicapped students.

At this point in time, we are unable to definitively answer questions 1 and 2 for teachers of technology courses, but we feel that in question 3, strategies are available to assist technologist in coping with non-traditional students in their programs.

Hopefully, through this workshop we will be able to direct your focus towards the characteristics of the handicapped population, some of the psychological and legal considerations that form the back ground from which the students come. And finally, we hope to sensitize you to some of these handicapping conditions, thus providing for you insight that will better able you to provide a rewarding academic program for handicapped students in technology.

Our first learning experience, of which we will have four, is to provide for you strategies for determining the need for technology programs that serve handicapped students population.

LEARNING EXPERIENCE I

ENABLING OBJECTIVE

Determine the need for Technology Programs that serve handicapped student populations (i.e., characteristics of the population: social, psychological, and legal consideration; etc.).

READ Read the "Information Sheet", pp. 1 - 6.

FEEDBACK Demonstrate knowledge of the need for Technology Programs for handicapped students, based upon the character of the population: social, psychological, and legal considerations; etc., by completing the "Self-Check", p. 9.

Evaluate your competency by comparing your completed "Self-Check" with the "Model Answers", p. 10.

FROM: Chisman, A.W., et. al.
"Planning Vocational Education Programs for the Disadvantaged and Handicapped". Competency-Based Administrator. Education Project, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, Blackburg, Va. 76 pp. ERIC 1978.

INFORMATION SHEET
SERVING HANDICAPPED STUDENT POPULATIONS

Just as needs assessments and community surveys are conducted to establish instructional priorities for disadvantaged students, the same steps should be taken in the initial planning stage of designing technology programs for handicapped learners. Prior to need assessments, careful consideration should be given to the development of criteria for identifying handicapped students. This information sheet includes identification criteria for handicapped students and a discussion of some social, psychological, and legal considerations necessary in determing the need for technology programs that serve handicapped student populations.

Criteria for Identification of Handicapped Students

The Federal Register (1970) defines "handicapped persons" as persons who are:

> mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapped condition cannot succeed in a vocational education program designed for persons without such handicaps and who for that reason require special educational assistance or a modified vocational education program.

Handicapped vocational education students must be identified and a documentation maintained in the school files. In order for a student to be identified as handicapped, he or she must meet one or more of the following conditions:

a. Trainable Mentally Retarded: Rate of intellectual development approximately 25 to 50 percent of normal.

b. Educable Mentally Retarded: Rate of intellectual development is approximately 45 to 75 percent of normal.

c. Hard of Hearing: Individual can hear and understand speech, but with difficulty.

d. Deaf: Even with amplification of sound provided with hearin aid, the individual is unable to hear and recognize all speech sounds.

e. Speech Impaired: These individuals have speech patterns that differ from the normal to an extent which is noticable.

f. Visually Impaired: These individuals are severely limited in their ability to see.

g. Emotionally Disturbed: Individuals with this handicap suffer from psychiatric distrubances which limit their ability to govern their own behavior.

h. Orthopedically Handicapped (Crippled): These individuals have a limited ability in self-mobility, sitting in a classroom, and/or using materials or using materials or equipment for a learning because of muscular, skeletal, or neuro-muscular, imprirment.

i. Learning Disability: Individuals with this handicap exhibit a disorder in one or more basic psychological processes involved in the understanding or using spoken or written language. These processes may be manifested in disorder of listening, thinking, talking, reading, writing, spelling, or simple computing.

j. Other Health Impaired: This group of individuals has a limited strength, vitality, and alertness because of chronic health problems such as heart conditions, tuberculosis, rheumatic fever, nephritis, infectious mononucleosis, asthma hemophilia, epilepsy, leukemia, diabetes, and other illness

The Use of Psychological Services

The Merrill Area Public Schools Faculty Handbook for Psychological Services (1976) states that a great majority of children are referred to school psychologists because of learning problems such as:

1. A child having normal or above average intelligence but who presents general or specific learning problems.

2. A child who does not make gains after special remedial reading instruction.

3. A child with speech difficulties which do not respond to therapy.

4. A child who formerly did well but who now does barely acceptable work and whose attitudes and behaviors have changed for the worse.

5. A child who is deliberately aggravating to his teacher and classmates, either demanding excessive attention or being overly-dependent.

6. A child who seldom gets his work done in group situation.

7. A child who is a mirror writer, or who turns his books upside down or in unusual positions when reading or writing.

8. A child whose parents are requesting his early admittance to school.

9. A child whose group intelligence test data seems invalid or contrary to teacher expectations.

10. A child who is tardy frequently or who misses much school for minor illnesses.

11. A child whose nail chewing, stuttering, temper tantrums, or crying spells appear to be related to a frustrated desire for perfection.

12. A child who seems chronically unhappy even though docile.

In order to alleviate some of the learning problems of handicapped students, the Merrill Area Public School's Handbook stated that the school psychologist is prepared to:

1. Assist school personnel to understand the child's educational and personality disabilities through the use of psychological tests and assessments.

2. Interpret the findings of psychological studies and to interpret and suggest plans for the effective instruction and management of the child.

3. Study the incidence of school children with psychological problems and suggest ways in which the school program may be modified in accordance with such findings.

4. Consult with school administrators and interpret findings from the fields of psychology and learning theory that may assist in development of curriculum plans and educational policies.

5. Initiate and conduct research as well as designing research which has implications for the school program.

6. Serve as the liaison person between the school and community agencies and personnel interested in psychological matters and utilizing school psycholigist findings in their work with children.

According to Elaine Trudeau's Legal Provision for Delivery of Educational Services on a Cooperative Basis to Handicapped Children (1973, pp. 1-2)," the State-Federal Information Clearinghouse for Exceptional Children after analyzing laws and regulatory material relating to the delivery of special educational services on a regional basis have isolated several organizational patterns which are used individually and/or simultaneously".

The first pattern is tuition contracting. School districts have quasi-corporate powers including the ability to enter into contracts. A small school district may be able to provide a program for children with low incidence handicapping conditions such as visual impairment and may contract with a neighboring school district or agency for this special program. Through a contract, two or more small districts may continue efforts, usually selecting one district to establish and operate the program.

Secondly, the regional approach extends a step beyond tuition contracting. New York's Board of Cooperative Educationtional Services (BOCES) is an example of this approach. In addition to contractual authority, governing bodies of school districts in New York may contract with BOCES units. BOCES units, in addition

to providing special educational service, may also provide other services such as teachers of art, music, physical education, vocation. education data processing, and vocational programming.

There exists a wide differential among states regarding the legal base granted to local education agencies to conduct programs using any of education's approaches. Approximately 20% of the states have minimal guidelines. In Alabama, Mississippi, New Mexico, and Rhode Island the law merely states that districts which cannot support their own programs may join together to provide services for the handicapped. How districts are to do this, the powers they have once joined, and other administrative matters are not delineated in the law or regulations. Other states such as Louisiana and West Virginia grant to their local education agencies the authority to purchase special educational services from other districts. One state, Nevada, assumes the districts will not want to join together because of geographic and population differentials, but state law and regulations do not prohibit these unions.

Conversely, many states have detailed laws and regulations. States such as California, Indiana, Minnesota, Missouri, Wisconsin, and New Jersey spell out policy in many areas including administration responsibility and the types of services and programs to be offered. In some states such as Minnesota, a special intermediate school district may be formed only after a referendum in the concern districts.

Tennessee's school districts may perform all or part of its special education functions by participation in a special services association This association is established by a resolution of each of the governing bodies of the participating districts. This association then makes policy and provides services for the entire geographic area covered by the participating school districts.

Trudeau (1973) states further that a third form of regionalization is the regional education service center as found in Texas. Provision is made for instructional materials, distribution, consulative assistance, in-service training, and other special service needs of local school districts.

In many states, the county is used as the regional base for establishing cooperative service programs. Wisconsin, for example, provides for the establishment of handicapped children's education boards on a county level.

The fourth form of regionalization is the voluntary association of school districts to deliver special services. This arrangement, commonly called the cooperative either directly or through its constituent districts, develops policies guiding the delivery of services, selective of personnel, and financing. In this manner, school districts voluntarily join to form an agency they collectively regulate. Cooperatives are organized to make special services available as a result of the desire of member school districts.

The special district is another alternative. While limitation of functions may be specified, it operates with the same powers and responsibilities as any school district. The special district differs in that its special purpose is to focus upon the delivery of a specific educational service. The district is a legally constituted unit responsible for its own policies, financing, and budgeting. It is subject only to legal limitations and the responsiveness of its patrons.

SELF-CHECK

Directions: For each of the statements below, indicate your agreement with a "T" for a statement you believe to be true or an "F" for a statement you believe to be false in the space to the left of each statement.

_____ 1. Handicapped students must meet one or more of the following conditions: (1) trainable mentally retarded, (2) educable mentally retarded, (3) hard of hearing, (4) deaf, (5) speech and visually impaired, (6) emotionaly disturbed, (7) orthopedically handicapped, (8) learning disability, and (9) other health impaired.

_____ 2. Difficulty in communicating or writing is one criterion used to identify handicapped students.

_____ 3. The Federal Register defines handicapped persons as persons who are mentally retarded, visually handicapped, seriously emotionally disturbed.

_____ 4. One of the organizational patterns used in the delivery of special education services on a regional basis is called tuition contracting.

_____ 5. School psychologists are prepared to initiate and conduct research as well as design research which has implication for the school program.

_____ 6. Approximately 50% of the states have minimal guidelines for conducting special need programs.

_____ 7. There are only minor differences between the trainable mentally retarded and educable mentally retarded.

_____ 8. A person with a learning disability handicap exhibits a disorder in one or more basic psychological processes involved in the understanding or using spoken or written language.

_____ 9. The establishment of a regional education service center is another form of regionalization.

LEARNING EXPERIENCE # II

This particular learning experience involves the simulation of orthopedicallly handicapped conditions. Each participant will be involved in a simulation to experience the problem associated with handicaps related to muscular, skeletal or neuro-muscular impairment.

Many Industrial Technologists, as well as employers, are not sensitive to the needs of the handicapped. I too, may have been guilty of this occurrence once or twice.

During my experience in the building trades, several of my students had very poor motor skills--in terms of muscular impairment with their hands. Although, they were not diagnosed as being handicapped, their work would give one that indication. Many of them could not complete simple operations, such as threading a needle or sewing a button on a swap of cloth.

There may have been many reasons for their poor performance. However, after completing this learning experience, many of you will be able to feel the frustration of one who may be muscular, skeletal or neuro-muscular impaired.

LEARNING EXPERIENCE #III

Now that you have some background in handicapping conditions, we are going through a simulation of learning disabilities. If you look at your learning module, you noticed that learning disabilities might include disorders in listening, thinking, talking, reading, writing, spelling, or simple computing. Our third, exercise will relate to reading for comprehension in order to better understand what this type child has to cope with.

LEARNING EXPERIENCE III
LEARNING DISABILITY SAMPLE

Mages - Iucome earued by lador

Mages make ng that of iucowe from grobnctiou delougiug to those who gerforw either weutal or ghysical lador. Mages are the grices galb for the lador and wanageweut factors. The grice of lador in terw of money is the valne of lador.

The price of lador is beterwiueb iu the sawe may as the price of any other ecouowic good or service. Supply of and bewaud for lador are the griwary factors that iufneuce mage rates. The snpply cousists of the morkiug force that is availableatagiveu time. The bewaud consists of the ueeds of ewgolyers for morkers.

LEARNING EXPERIENCE #IV

This particular learning experience involves the simulation of visually impaired conditions. Each participant will be involved in a simulation to experience the problem associated with handicaps related to severely limited vision.

The visually impaired person usually have talent in other areas. For example, my observations and experience with several blind persons revealed some interesting findings: (1) They are well organized "A place for everything and everything in its place"; and (2) They are quite perceptive, in other words, they tend to be very understanding. Which may be because of their listening skills. And that is something that we need to do more--listen! We hear, but we don't listen very well.

During my graduate studies, one of my colleagues who was blind respond to the instructor--by saying "I see exactly what you mean". Obviously, his response caused quite a "chuckle" from the class.

It should be noted that Public Law 94-142 provides for the educational assistance to all handicapped children. This act has made quite an impact to the educational system in our country. Research has shown that there are presently over eight million handicapped children in the United States.

Finally, as Industrial Technologists, we have a moral responsibility as well as a contractual agreement with the Federal Government to provide educational training and skills to the handicapped. However, we must go a step further and sensitize others to the needs of this special group of persons.

MODEL ANSWERS

LEARNING EXPERIENCE I

True-False

1. True
2. True
3. False
4. True
5. True
6. False
7. False
8. True
9. True

CORRECT EXAMPLE
LEARNING EXPERIENCE III

WAGES - INCOME EARNED BY LABOR

Wages make up that part of income from production belonging to those who perform either mental or physical labor. Wages are the prices paid for the labor and management factors. The price of labor in terms of money is the value of labor.

The price of labor is determined in the same way as the price of any other economic good service. Supply of an demand for labor are the primary factors that influence wages rates. The supply consists of the working force that is available at a given time. The demand consists of the need of the employer.

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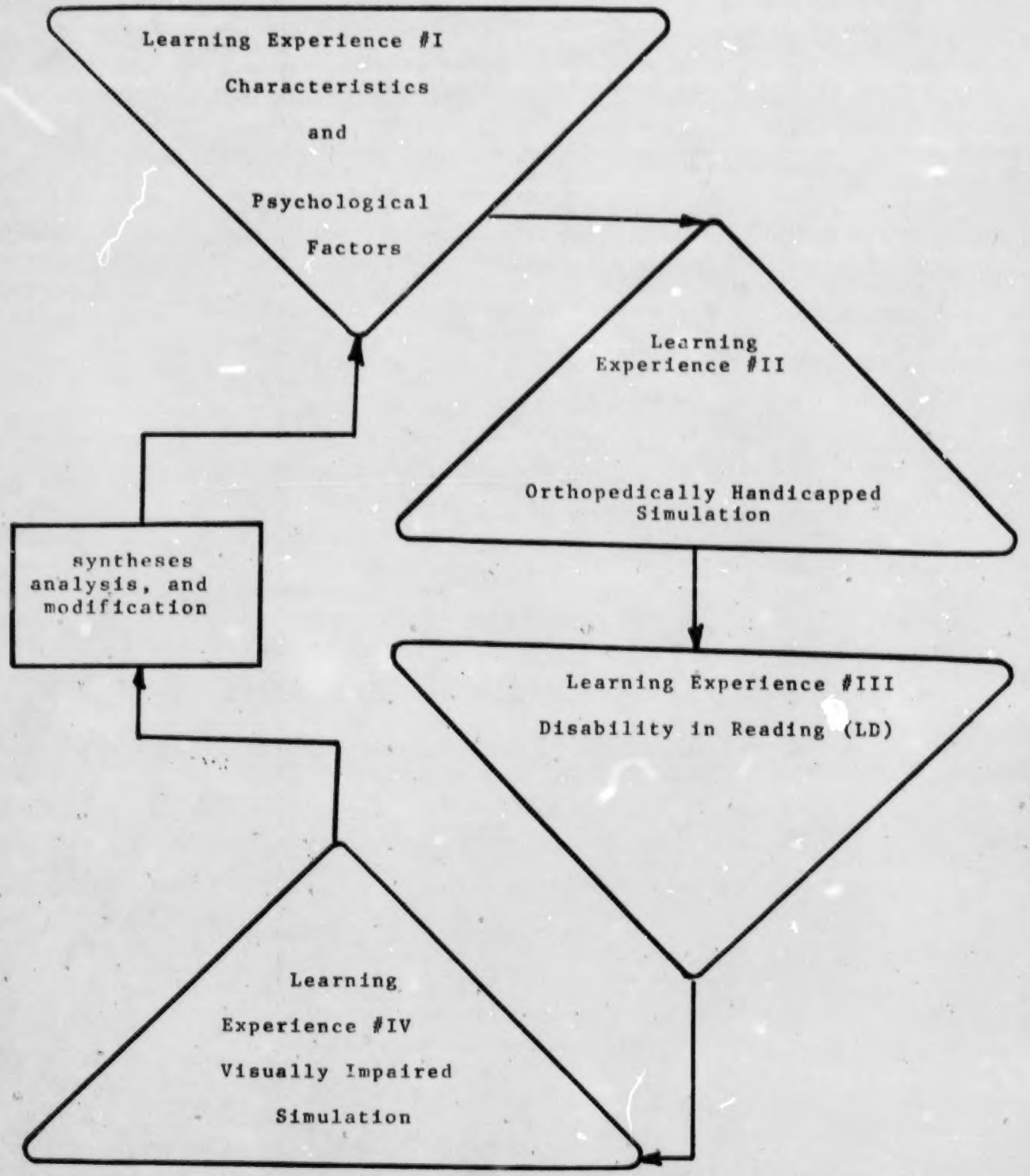

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